

**IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION**

INTELLIGENT WATER SOLUTIONS, LLC

Plaintiff

v.

KOHLER CO.,

Defendant.

§
§
§
§
§
§
§
§
§

Case No. 2:16-cv-00689-JRG

Defendant Kohler Co.'s Claim Construction Memorandum

Table of Contents

<i>Background</i>	2
I. The Products at Issue and Technology	2
II. The '764 Patent	3
III. History of the Claimed Invention	3
<i>Argument</i>	4
I. Legal Standards	4
II. The Court Should Reject IWS's Attempts to Avoid the Structural Disclosure Requirements of 35 U.S.C. § 112(f) and Hold the Claims Invalid as Indefinite.	6
A. "System Control Means for Receiving Signals from Said Thermosensor and User Interface and for Processing Said Signals to Generate Appropriate Control Signals to Control Said Fluid Supply Control Valve Actuator(s) and Said Flow Control Valve Actuator Means to Achieve Programmed or User-Selected Set Temperature, Flow Rate and Volume at Said System Outlet" (Claim 1 and 26)	7
B. "Microprocessor Comprising a Central Processing Unit (CPU) Operably Connected With an Input/Output (I/O) Inter-Face, Random Access Memory (RAM), and Read Only Memory (ROM)" (Claim 10)	11
C. "Programmable Digital Processor Which Implements Feedback Control of One or More System Parameters Based on a Control Algorithm That Is Selected from a Proportional, Proportional Plus Integral, Proportional Plus Integral Plus Derivative, or Feed Forward Control Algorithm" (Claim 13)	13
D. "Remote System Monitoring/Control Device Operable for Bidirectional Data Transmission and Reception Between Said Remote Monitoring/Control Device and Said System Control Means and/or System Sensor(s) for Remotely Monitoring and Controlling Said One or More System Functions or Parameters, Wherein Said Remote Monitoring/Control Device Operates to Remotely Generate Signals to Remotely Select Said One or More System Functions or Parameters, and Wherein Said Remote Monitoring/Control Device Also Operates to Receive Signals from Said System Control Means and/or Said One Or More System Sensor(s) to Remotely Monitor Said One or More System Functions or Parameters" (Claim 1; see also Claims 4 and 7)	14

III.	The Court Should Reject IWS’s Remaining Proposed Constructions.....	16
A.	“Fluid Supply Control Valve” (Claims 1 and 26).....	16
B.	“Fluid Control Valve” (Claims 1 and 26).....	20
C.	“User Interface Input” (Claim 7)	21
D.	“User Input Means for Selecting a Set Temperature, Flow Rate and Volume of Fluid at Said System Outlet” (Claim 1 and 26)	22
E.	“Fluid Supply Control Valve Actuator . . . for Actuating Opening and Closure Operations Thereof” (Claims 1 and 26)	24
F.	“Flow Control Valve Actuator . . . for Actuating Opening and Closure Operations Thereof” (Claims 1 and 26).....	25
G.	“Memory Means for Entry and Storage of User-Defined Temperature Settings” (Claim 6)	26
H.	“Domestic Water Supply System” (Claim 24)	27
I.	“External Data Storage and Input Means for Storing and Transferring Data to Said System Control Means to Control One or More System Function(s) or Parameter(s)” (Claim 26)	28
	Conclusion	29

Table of Authorities

	Page(s)
Cases	
<i>Alice Corp. Pty. Ltd. v. CLS Bank Int'l</i> , 134 S. Ct. 2347 (2014).....	9
<i>Altiris, Inc. v. Symantec Corp.</i> , 318 F.3d 1363 (Fed. Cir. 2003).....	11
<i>Andersen Corp. v. Fiber Composites, LLC</i> , 474 F.3d 1361 (Fed. Cir. 2007).....	18
<i>Apple Inc. v. Motorola, Inc.</i> , 757 F.3d 1286 (Fed. Cir. 2014).....	8
<i>Aristocrat Techs. Austl. Pty. Ltd. v. Int'l Game Tech.</i> , 521 F.3d 1328 (Fed. Cir. 2008).....	6, 10
<i>Becton, Dickinson & Co. v. Tyco Healthcare Grp., LP</i> , 616 F.3d 1249 (Fed. Cir. 2010).....	21
<i>C.R. Bard, Inc. v. U.S. Surgical Corp.</i> , 388 F.3d 858 (Fed. Cir. 2004).....	19
<i>Datamize, LLC v. Plumtree Software, Inc.</i> , 417 F.3d 1342 (Fed. Cir. 2005).....	4
<i>DealerTrack, Inc. v. Huber</i> , 674 F.3d 1315 (Fed. Cir. 2012).....	12
<i>Eon Corp. IP Holdings LLC v. AT&T Mobility LLC</i> , 785 F.3d 616 (Fed. Cir. 2015).....	12
<i>Eon Corp. IP Holdings LLC v. Silver Springs Networks, Inc.</i> , 815 F.3d 1314 (Fed. Cir. 2016).....	16
<i>Ergo Licensing, LLC v. CareFusion 303, Inc.</i> , 673 F.3d 1361 (Fed. Cir. 2012).....	<i>passim</i>
<i>Funai Elec. Co. v. Daewoo Elecs. Corp.</i> , 616 F.3d 1357 (Fed. Cir. 2010).....	19
<i>Halliburton Energy Servs. v. M-I LLC</i> , 514 F.3d 1244 (Fed. Cir. 2008).....	21

<i>Intellectual Ventures II LLC v. BITCO Gen. Ins. Corp.</i> , No. 25-cv-59, 2016 U.S. Dist. LEXIS 3299 (E.D. Tex. Jan. 11, 2016).....	7, 8, 14, 15
<i>In re Katz Interactive Call Processing Litig.</i> , 639 F.3d 1303 (Fed. Cir. 2011).....	29
<i>Laitram Corp. v. Rexnord, Inc.</i> , 939 F.2d 1533 (Fed. Cir. 1991).....	21
<i>Med. Instrumentation & Diagnostics Corp. v. Elekta AB</i> , 344 F.3d 1205 (Fed. Cir. 2012).....	5
<i>Meds. Co. v. Mylan, Inc.</i> , Nos. 2015-1113, 2015-1151, 2015-1181, 2017 U.S. App. LEXIS 5947 (Fed. Cir. Apr. 6, 2017).....	19, 21
<i>Nautilus, Inc. v. Biosig Instruments, Inc.</i> , 134 S. Ct. 2120 (2014).....	4, 5
<i>Noah Sys., Inc. v. Intuit Inc.</i> , 675 F.3d 1302 (Fed. Cir. 2012).....	11, 12, 13
<i>Nystrom v. TREX Co.</i> , 424 F.3d 1136 (Fed. Cir. 2005).....	19
<i>Phillips v. AWH Corp.</i> , 415 F.3d 1303 (Fed. Cir. 2005).....	9, 16, 17
<i>Robert Bosch, LLC v. Snap-On Inc.</i> , 769 F.3d 1094 (Fed. Cir. 2014).....	15
<i>Taurus IP, LLC v. DaimlerChrysler Corp.</i> , 726 F.3d 1306 (Fed. Cir. 2013).....	19
<i>Triton Tech of Tex., LLC v. Nintendo of Am., Inc.</i> , 753 F.3d 1375 (Fed. Cir. 2014).....	<i>passim</i>
<i>U.S. Surgical Corp. v. Ethicon, Inc.</i> , 103 F.3d 1554 (Fed. Cir. 1997).....	25
<i>Voice Techs. Group, Inc. v. VMC Sys. Inc.</i> , 164 F.3d 605 (Fed. Cir. 1999).....	9
<i>Williamson v. Citrix Online, LLC</i> , 792 F.3d 1339 (Fed. Cir. 2015) (<i>en banc</i>)	<i>passim</i>

Statutes

35 U.S.C. § 112(a)	10
35 U.S.C. § 112(b)	1, 4, 12, 27
35 U.S.C. § 112(f).....	<i>passim</i>
35 U.S.C. § 112(6)	14, 24, 26

The patent at issue in this case describes a system for controlling the temperature, flow rate, and volume of water in a shower or bath tub. As the '764 patent's background section and its inventors explain, the problem being solved was how to avoid being burned or frozen by hot or cold water when turning on a shower. The inventors' solution, per their testimony, was simple – a remotely controlled automatic temperature control system.

But that would have been too simple a solution to even apply for a patent. What the '764 patent claims, however, is much narrower. It claims a system for controlling *three* variables: temperature, flow rate, and volume. Because the inventors, Garvey and Onorati, did not attempt to invent anything more than a remote temperature control or disclose to their patent attorney any means for controlling for other parameters, the resulting patent lacks critical details regarding how to regulate flow rate and volume. The '764 patent contains no algorithms to provide structure for its means-plus-function claim terms. The patent does not teach how its so-called “system control means” works. Thus, the '764 patent is indefinite and invalid under 35 U.S.C. § 112(b) and (f).

The patent's indefiniteness arises from the fact that as Garvey and Onorati have testified, the named inventors developed nothing more than temperature control. They readily concede that they did not invent any flow rate or volume control, much less a system that could control two or three variables at the same time. As Onorati testified, “there would be a lot of rework done to be able to do that. Again, this was not intended to do volume. I'd probably have to start from scratch. . . . It's just – this design really was not incorporated – did not have that in mind. So like I said, I would really just start over from scratch because there's a lot of components that aren't there to implement that feature.” (Stocco Decl.¹ Ex. 1 (hereafter “Onorati Dep.”) at 64.)

¹ “Stocco Decl.” refers to the Declaration of Chantelle Stocco filed with this brief.

Background

I. The Products at Issue and Technology

Plaintiff Intelligent Water Solutions (“IWS”) accuses defendant Kohler’s DTV+ and DTV Prompt shower systems of infringing the ’764 patent. Kohler is a world leader in innovative bathroom design. Most pertinent to this case, Kohler’s Mira subsidiary has been selling shower systems with remotely controlled temperature settings since introducing its “Electronic Bathroom” in 1987. (Stocco Decl. Ex. 2.) Neither of Kohler’s accused shower systems controls water flow rate and volume. They simply allow a user to set the water temperature. Therefore, even if the ’764 patent is valid despite being indefinite and anticipated, the Kohler systems do not infringe the ’764 patent.

The technology required to automatically control water temperature is simple: one needs to attach an electric motor to the valve that regulates how much hot and cold water makes it to a faucet. The valve needs to be capable of precise adjustments in order to control the exact amount of hot and cold water flowing through to the faucet to achieve the desired temperature. In turn, the electric motor controls the valve. The electric motor receives signals from some sort of control device, such as a circuit board or a computer, causing the motor to open or close the valve as needed, based on the user’s temperature selection.

The complexity increases significantly if one desires to control more than temperature, such as flow rate and volume. The increase in calculational complexity is quite literally the difference between performing simple algebra and solving differential equations. A controller makes those real-time calculations and translates them into physical adjustments of multiple control valves and other components of the system.

II. The '764 Patent

IWS asserts Claims 1, 3, 4, 6, 7, 10, 13, 24, 26, and 27 of the '764 patent against Kohler, and all of those claims describe an apparatus having the same basic structure.² The asserted claims all describe a “fluid delivery system for controlling fluid temperature, flow rate and volume at a system outlet.” (Dkt. 55-1 (“’764 patent”), Cl. 1 and 26.)

III. History of the Claimed Invention

The patentees’ limited work on their invention underscores that key details are missing from the '764 patent. In 1993, Garvey found that he could not accurately control the temperature in the showers at his local YMCA. The water was always either too hot or too cold. As he explained in his deposition, the “problem” to be solved was “being burned or frozen” when taking a shower. (Stocco Decl. Ex. 3 (hereafter “Garvey Dep.”) at 62.) Therefore, he and Onorati, conceived of a system that would regulate the temperature of the shower – nothing else. (*Id.* at 63.) He further explained that the temperature control needed to be “as accurate as possible.” (*Id.*)

In 1997, the inventors built a prototype. It consisted of a “breadboard,”³ wired to a motor, connected to a valve, connected to the hot and cold water inputs to a faucet. (Garvey Dep. at 126, 164-65.) Their prototype did not control anything else, such as the water flow rate or volume. (*Id.* at 151-53; Onorati Dep. at 17, 62-64.) “This prototype was designed for temperature and that’s all it was intended to do.” (Onorati Dep. at 64.) Onorati further explained that trying to control additional variables like flow rate or volume would require additional components and “there would be a lot of rework done,” even suggesting they would have to “start over.” (*Id.* at 63-66.) The inventors did not build any other prototypes or make any

² Claims 1 and 26 are the only independent claims at issue.

³ A “breadboard” is a box or board to which a person can affix wires and transistors.

changes to their “invention.” (Garvey Dep. at 138; Onorati Dep. at 70.)

Their prototype also did not include any computer software. The “control logic” consisted of nothing more than the arrangement of wires and transistors on the breadboard. That was the “brains of the operation.” (Onorati Dep. at 54.) The inventors wrote no computer software or code. (Garvey Dep. at 141-42.)

During prosecution, the claims were initially rejected as obvious. (Stocco Decl. Ex. 4.) In order to overcome this rejection, the inventors added a claim element to independent Claim 1 and newly drafted Claim 26. In Claim 1, the inventors added a “remote system monitoring/control device.” (Stocco Decl. Ex. 5 at IWS547.) In Claim 26, the claim mirrored original Claim 1 and the inventors added “external data storage and input means.” (*Id.* at IWS548.) With those amendments, the Patent Office allowed the claims. (Stocco Decl. Ex. 6.)

Argument

I. Legal Standards

The Court can and should deem the ’764 patent invalid during the claim construction process because it is indefinite. *See Datamize, LLC v. Plumtree Software, Inc.*, 417 F.3d 1342, 1347 (Fed. Cir. 2005) (claim indefiniteness is a legal conclusion); *see also* Dkt. 29 at 5 (Docket Control Order) (directing the parties to raise indefiniteness arguments at claim construction).

The Patent Act requires that a patent must “conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as [the] invention.” 35 U.S.C. § 112(b); *Nautilus, Inc. v. Biosig Instruments, Inc.*, 134 S. Ct. 2120, 2124, 2129 (2014) (rejecting the former “insolubly ambiguous” standard and holding that a patent is indefinite if “its claims . . . fail to inform, with reasonable certainty, those skilled in the art about the scope of the invention”). The Court reasoned in *Nautilus* that a change in the indefiniteness standard was required to eliminate the incentive for patentees to inject ambiguity into their

claims to the detriment of the public. *Id.* at 2129.

In addition, when an inventor takes advantage of the “means-plus-function” format allowed in 35 U.S.C. § 112(f), the inventor must disclose the structure of his or her invention in the patent’s specification for the claim to be valid. *See Med. Instrumentation & Diagnostics Corp. v. Elekta AB*, 344 F.3d 1205, 1211 (Fed. Cir. 2012) (holding that “[i]f the specification is not clear as to the structure that the patentee intends to correspond to the claimed function, then the patentee has not paid the price but is rather attempting to claim in functional terms unbounded by any reference to structure in the specification”). Failure to “disclose adequate corresponding structure” renders a claim indefinite. *Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1352 (Fed. Cir. 2015) (*en banc*).

In *Williamson*, the court rejected the “strong presumption” that claims lacking the ritualistic “means” language were not means-plus-function claims. Instead, placing substance over form, the proper standard is whether the words of the claim are understood by persons of ordinary skill in the art to have a sufficiently definite meaning as the name for structure. *Id.* at 1349. Claims using generic terms such as “mechanism,” “element,” or “device,” or other “nonce” terms that reflect nothing more than verbal constructs and do not connote sufficiently definite structure are tantamount to using the word “means,” and therefore are governed by section 112(f). *Id.* at 1350 (finding “module” to be a nonce term). In turn, the patent’s specification must specify supporting structure in order to be valid under section 112(f).

As applied to patent claims directed to computer software, the definiteness rule requires an inventor to disclose flowcharts or algorithms underlying the claimed software invention:

If the function is performed by a general purpose computer or microprocessor, then the specification must also disclose the algorithm that the computer performs to accomplish that function. Failure to disclose the corresponding algorithm for a computer-implemented means-plus-function term renders the claim indefinite

[under 35 U.S.C. § 112, ¶ 2].

Triton Tech of Tex., LLC v. Nintendo of Am., Inc., 753 F.3d 1375, 1378-79 (Fed. Cir. 2014)

(citations omitted) (where the structure corresponding to the function was “a conventional microprocessor” the court found that no matter how well known a class of algorithms in the art, the patent must still disclose one). That is, it is not good enough to describe a program in general—the inventor must disclose how the software works. *Id.* Absent the strictures of section 112(f), it amounts to purely functional claiming, which is not permitted. *See Aristocrat Techs. Austl. Pty. Ltd. v. Int’l Game Tech.*, 521 F.3d 1328, 1333 (Fed. Cir. 2008) (“For a patentee to claim a means for performing a particular function and then to disclose only a general purpose computer as the structure designed to perform that function amounts to pure functional claiming.”).

II. The Court Should Reject IWS’s Attempts to Avoid the Structural Disclosure Requirements of 35 U.S.C. § 112(f) and Hold the Claims Invalid as Indefinite.

For a means-plus-function claim term, claim construction involves a couple different steps. *See Williamson*, 792 F.3d at 1351-55. First, the Court must identify the claimed function, which should be construed according to ordinary principles of claim construction. *Id.* at 1351. “Then, the court must determine what structure, if any, disclosed in the specification corresponds to the claimed function.” *Id.* An alleged corresponding structure “must be clearly linked or associated with the claimed function.” *Ergo Licensing, LLC v. CareFusion 303, Inc.*, 673 F.3d 1361, 1363 (Fed. Cir. 2012). It cannot merely repeat or paraphrase the means-plus-function claim language. *Id.* at 1363-64.

Numerous claim terms in the ’764 patent presumptively trigger the structural disclosure requirements of 35 U.S.C. § 112(f) by using the word “means.” *See Williamson*, 792 F.3d at 1348. Others use “nonce” words, such as “device,” “actuator,” or “system,” that have the same

effect. *See id.* at 1350. In many instances, however, there is no sufficiently definite, corresponding structure recited in the claims or disclosed in the specification. This lack of structure is not surprising in light of the inventors' failure to invent the inventions claimed in the '764 patent. The claims are therefore invalid. *Triton Tech*, 753 F.3d at 1378-79.

A. “System Control Means for Receiving Signals from Said Thermosensor and User Interface and for Processing Said Signals to Generate Appropriate Control Signals to Control Said Fluid Supply Control Valve Actuator(s) and Said Flow Control Valve Actuator Means to Achieve Programmed or User-Selected Set Temperature, Flow Rate and Volume at Said System Outlet” (Claim 1 and 26)⁴

IWS's Proposed Construction:	Kohler's Proposed Construction:
<p>Not a means-plus-function claim; plain and ordinary meaning; or</p> <p><u>Function</u>: receiving and processing signals</p> <p><u>Structure</u>: control unit; microprocessor, central processing unit, input-output interface, digital processor, controller, and memory</p>	<p><u>Function</u>: Receiving signals from said thermosensor and user interface and . . . processing said signals to generate appropriate control signals to control said fluid supply control valve actuator(s) and said flow control valve actuator means to achieve programmed or user-selected set temperature, flow rate and volume at said system outlet</p> <p><u>Structure</u>: Standalone controller, single task control logic unit, microprocessor, digital processor control unit, or CPU, and structural equivalents thereof</p> <p>This claim element is directed to software and the specification fails to “disclose an algorithm for performing the claimed function.” <i>Williamson v. Citrix Online, LLC</i>, 792 F.3d 1339, 1352 (Fed. Cir. 2015) (<i>en banc</i>). Therefore, the claim is indefinite.</p>

The term “system control means,” recited in Claims 1 and 26, is presumptively a means-plus-function term because of its use of the term “means.” *See Williamson*, 792 F.3d at 1348.

And IWS appears to concede that the “system control” prefix does not connote structure. (Dkt. 55 at 26-27.)⁵ IWS nevertheless refuses to acknowledge section 112(f)'s applicability, relying on *Intellectual Ventures II LLC v. BITCO Gen. Ins. Corp.*, No. 25-cv-59, 2016 U.S. Dist. LEXIS

⁴ To focus the Court on the most important disputes, Kohler addresses the most material or potentially dispositive claim terms first.

⁵ Page citations to docket entries refer to ECF page numbers.

3299 (E.D. Tex. Jan. 11, 2016) and *Apple Inc. v. Motorola, Inc.*, 757 F.3d 1286, 1299 (Fed. Cir. 2014) to claim that the high-level “inputs” and “outputs” recited in the claim somehow make “system control” structural.

Neither *Intellectual Ventures* nor *Apple*, however, involved presumptive means-plus-function terms. They also do not support a bright line rule that mere recitation of inputs and outputs will confer sufficiently definite structure to non-structural terms such as “system control means.” Indeed, the Federal Circuit rejected similar arguments in *Williamson*. See 792 F.3d at 1351 (“While portions of the claim do describe certain inputs and outputs at a very high level, . . . the claim does not describe how the [term] interacts with other components . . . in a way that might inform the structural character of the limitation-in-question or otherwise impart structure to the [term] as recited in the claim.”).

Here, IWS identifies no basis for concluding that “system control means” provides sufficiently definite structure. Instead, IWS points to generic, nonce words used in the specification such as “system control *unit*” or “control *unit*.” (Dkt. 55 at 27 (emphasis added).) But the fact that the specification replaces the word “means” with “unit” is not evidence that the term “system control means” has a definite structure. See *Ergo Licensing*, 673 F.3d at 1363-64 (“The recitation of ‘control device’ provides no more structure than the term ‘control means’ itself, rather it merely replaces the word ‘means’ with the generic term ‘device.’”).

The structure provided in the patent is a microprocessor, legally requiring an algorithm. (’764 patent, 2:44-63; 4:37-44; 6:36-44; 6:60-7:1; 7:32-43; 9:11-20.) The ’764 patent provides no such algorithms other than Figs. 2A, 2B, and 6 which focus solely on a single variable, *i.e.*, temperature control, and do not govern flow rate or volume control, or controlling multiple variables.

The named inventors also define the “system control means” in purely functional terms.⁶ Onorati repeatedly referred to it as “a way of getting the information to the control unit” and that “anything” could perform the function. (Onorati Dep. at 55, 95-96, 106, 108-09, 112.)⁷ Onorati also confirmed that the “system control means” required control logic or software but the patent does not provide any control logic or programming. (Onorati Dep. at 112-113, 116, 118.)

IWS thus presents a fallback position, attempting to fit this case into the “narrow exception to the requirement that an algorithm must be disclosed for a general-purpose computer to satisfy the disclosure requirement: when the function can be achieved by any general purpose computer without special programming.” *Ergo Licensing*, 673 F.3d at 1364-65 (quotations omitted).⁸ The “system control means,” however, must do more than just receive and process signals. As expressly recited in the claim, it must process the signals “to generate appropriate control signals to control said fluid supply control valve actuator(s) and said flow control valve actuator means to achieve programmed or user-selected set temperature, flow rate and volume at

⁶ See *Voice Techs. Group, Inc. v. VMC Sys. Inc.*, 164 F.3d 605, 615 (Fed. Cir. 1999) (“An inventor is a competent witness to explain the invention and what was intended to be conveyed by the specification and covered by the claims. The testimony of the inventor may also provide background information, including explanation of the problems that existed at the time the invention was made and the inventor’s solution to these problems.”).

⁷ The words of a claim “are generally given their ordinary and customary meaning”—that is, “the meaning that the [words] would have to a person of ordinary skill in the art in question at the time of the invention.” *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312-13 (Fed. Cir. 2005). IWS contends that a person of ordinary skill in the art would have a bachelor’s degree in electrical or mechanical engineering and experience in fluid systems. (Stocco Decl. Ex. 7 at Resp. to Interrog. 1.) IWS, however, offers no evidence in support of this definition. Indeed, Garvey does not have that background and considered it “legalese.” (Garvey Dep. at 49.) Onorati does have that background but could not provide any explanation for it. (Onorati Dep. at 48-49.) For the sake of argument, and to avoid any factual disputes at this stage of the case, Kohler will assume that IWS’s definition of a “POSITA” is correct and that Onorati is a person of ordinary skill in the art.

⁸ If IWS is correct and general purpose computing components provide sufficient structure, then IWS has a patent eligibility problem because the claims would do nothing more than take an abstract concept (*i.e.*, control of water temperature, flow rate and volume) and teach implementing that abstract idea on a computer. See *Alice Corp. Pty. Ltd. v. CLS Bank Int’l*, 134 S. Ct. 2347, 2360 (2014).

said system outlet.” (’764 patent, Cl. 1.) This requires special programming and the attendant disclosure of a corresponding algorithm. *See Ergo Licensing*, 673 F.3d at 1365 (“If special programming is required for a general-purpose computer to perform the corresponding claimed function, then the default rule requiring disclosure of an algorithm applies. It is only in the rare circumstances where any general-purpose computer without any special programming can perform the function that an algorithm need not be disclosed.”); *see also* ’764 patent, 9:8-9 (“For example, the control unit is ***specifically programmed***”) (emphasis added); *id.* at 9:21-23 (“Control of system parameters and functions within the invention may be provided entirely by the control unit 34 by ***original programming***.”) (emphasis added).

Finally, IWS concedes, as it must, that the ’764 patent only discloses an algorithm for achieving “programmed or user-selected set temperature” in a fluid supply system in Figs. 2A and 2B and that no algorithm is provided for flow rate or volume control—not to mention control of all three parameters at once. (*See also* Onorati Dep. at 84.) As a result, IWS attempts to conflate the requirement of enablement under section 112(a) and the requirement to disclose the structure that performs the claimed function under section 112(f), latching on to the specification’s identification of general classes of algorithms and a statement that adaptive algorithms other than the disclosed temperature-control algorithm are known in the art and can be readily implemented. The question here, however, is not one of enablement—it is a question of disclosure required by section 112(f). *E.g., Triton Tech*, 753 F.3d at 1378-79; *Aristocrat Techs.*, 521 F.3d at 1333.

In the end, because the ’764 patent fails to disclose an algorithm “to generate appropriate control signals to control said fluid supply control valve actuator(s) and said flow control valve actuator means to achieve programmed or user-selected set temperature, flow rate and volume at

said system outlet,” it must be treated as disclosing no algorithm at all. *See Noah Sys., Inc. v. Intuit Inc.*, 675 F.3d 1302, 1319 (Fed. Cir. 2012) (“When the specification discloses an algorithm that only accomplishes one of multiple identifiable functions performed by a means-plus-function limitation, the specification is treated as if it disclosed no algorithm.”). The criticality of a full disclosure was made clear by Onorati. **“So like I said, I would really just start over from scratch because there’s a lot of components that aren’t there to implement that feature.”** (Onorati Dep. at 64 (emphasis added).) Both independent Claims 1 and 26 therefore are invalid as indefinite.

B. “Microprocessor Comprising a Central Processing Unit (CPU) Operably Connected With an Input/Output (I/O) Inter-Face, Random Access Memory (RAM), and Read Only Memory (ROM)” (Claim 10)

IWS’s Proposed Construction:	Kohler’s Proposed Construction:
Not a means-plus-function claim; plain and ordinary meaning	<p><u>Function</u>: Receiving signals from said thermosensor and user interface and . . . processing said signals to generate appropriate control signals to control said supply control valve actuator(s) and said flow control valve actuator means to achieve programmed or user-selected set temperature, flow rate and volume at said system outlet</p> <p><u>Structure</u>: This claim element is directed to software and the specification fails to “disclose an algorithm for performing the claimed function.” <i>Williamson v. Citrix Online, LLC</i>, 792 F.3d 1339, 1352 (Fed. Cir. 2015) (<i>en banc</i>). Therefore, the claim is indefinite.</p>

In Claim 10, the phrase “microprocessor comprising a central processing unit (CPU) operably connected with an input/output (I/O) inter-face, random access memory (RAM), and read only memory (ROM)” provides an illusory limitation on the “system control means” of Claim 1, and does not rebut the presumption of section 112(f)’s applicability. To rebut the presumption that the term “system control means” is a means-plus-function term, Claim 10 must add sufficiently definite structure to perform the claimed functions in their entirety. *Altiris, Inc. v. Symantec Corp.*, 318 F.3d 1363, 1376 (Fed. Cir. 2003). Claim 10 does not do so.

As noted above, the claimed functions—“to generate appropriate control signals to control said fluid supply control valve actuator(s) and said flow control valve actuator means to achieve programmed or user-selected set temperature, flow rate and volume at said system outlet”—cannot be carried out on a general purpose computer without specific programming. Claim 10 does not recite any programming at all; it only recites generic computer components. This is not sufficient to perform the claimed functions in their entirety. *See DealerTrack, Inc. v. Huber*, 674 F.3d 1315, 1329 (Fed. Cir. 2012) (“A general purpose computer can perform [special-purpose functions] only if the program it executes is capable of performing those functions.”); *Eon Corp. IP Holdings LLC v. AT&T Mobility LLC*, 785 F.3d 616, 623 (Fed. Cir. 2015) (“A microprocessor or general purpose computer lends sufficient structure only to basic functions of a microprocessor. All other computer-implemented functions require disclosure of an algorithm.”).

As with “system control means,” the structure provided in the patent is a microprocessor, requiring “feedback algorithms.” (’764 patent, 2:44-63; 4:37-44; 6:36-44; 6:60-7:1; 7:32-43; 9:11-20.) The ’764 patent provides no such algorithms other than Figs. 2A, 2B, and 6 which focus solely on temperature control and do not govern flow rate or volume control.⁹

In sum, the structural disclosure requirements of section 112(f) apply to Claim 10, as they did to Claim 1. Because the ’764 patent fails to disclose an algorithm “to generate appropriate control signals to control said fluid supply control valve actuator(s) and said flow control valve actuator means to achieve programmed or user-selected set temperature, flow rate and volume at said system outlet,” it must be treated as disclosing no algorithm at all. *See Noah Sys.*, 675 F.3d at 1319; *Triton Tech*, 753 F.3d at 1378-79. For the same reason as discussed above, Claim 10

⁹ Onorati also confirmed the rather obvious point that a programmable digital processor required a program in order to function. (Onorati Dep. at 99.) But the inventors never wrote any program for their purported invention. (Garvey Dep. at 141-42; Onorati Dep. at 116.)

therefore is invalid as indefinite.

C. “Programmable Digital Processor Which Implements Feedback Control of One or More System Parameters Based on a Control Algorithm That Is Selected from a Proportional, Proportional Plus Integral, Proportional Plus Integral Plus Derivative, or Feed Forward Control Algorithm” (Claim 13)

IWS’s Proposed Construction:	Kohler’s Proposed Construction:
Not a means-plus-function claim; plain and ordinary meaning	<p><u>Function</u>: Receiving signals from said thermosensor and user interface and . . . processing said signals to generate appropriate control signals to control said supply control valve actuator(s) and said flow control valve actuator means to achieve programmed or user-selected set temperature, flow rate and volume at said system outlet</p> <p><u>Structure</u>: This claim element is directed to software and the specification fails to “disclose an algorithm for performing the claimed function.” <i>Williamson v. Citrix Online, LLC</i>, 792 F.3d 1339, 1352 (Fed. Cir. 2015) (<i>en banc</i>). Therefore, the claim is indefinite.</p>

The term “programmable digital processor which implements feedback control of one or more system parameters based on a control algorithm that is selected from a proportional, proportional plus integral, proportional plus integral plus derivative, or feed forward control algorithm,” as recited in Claim 13, too provides no meaningful structural limitations on the “system control means” of Claim 1, and does not rebut the presumption of section 112(f)’s applicability. The claim simply identifies another generic computer component, and adds that it implements a generic class of algorithms. Likewise, the structure provided in the specification is a microprocessor, requiring “feedback algorithms.” (’764 patent, 2:44-63; 4:37-44; 6:36-44; 6:60-7:1; 7:32-43; 9:11-20.)

Because the ’764 patent fails to disclose an algorithm “to generate appropriate control signals to control said fluid supply control valve actuator(s) and said flow control valve actuator means to achieve programmed or user-selected set temperature, flow rate and volume at said system outlet,” it must be treated as disclosing no algorithm at all. *See Noah Sys.*, 675 F.3d at 1319; *Triton Tech*, 753 F.3d at 1378-79. Claim 13 is thus invalid as indefinite.

- D. “Remote System Monitoring/Control Device Operable for Bidirectional Data Transmission and Reception Between Said Remote Monitoring/Control Device and Said System Control Means and/or System Sensor(s) for Remotely Monitoring and Controlling Said One or More System Functions or Parameters, Wherein Said Remote Monitoring/Control Device Operates to Remotely Generate Signals to Remotely Select Said One or More System Functions or Parameters, and Wherein Said Remote Monitoring/Control Device Also Operates to Receive Signals from Said System Control Means and/or Said One Or More System Sensor(s) to Remotely Monitor Said One or More System Functions or Parameters” (Claim 1; see also Claims 4 and 7)**

IWS’s Proposed Construction:	Kohler’s Proposed Construction:
Not a means-plus-function claim; plain and ordinary meaning	<p><u>Function</u>: (i) bidirectional data transmission and reception between said remote monitoring/control device and said system control means and/or system sensor(s) for remotely monitoring and controlling said one or more system functions or parameters; (ii) remotely generate signals to remote select said one or more system functions or parameters; and (iii) receive signals from said system control means and/or said one or more system sensor(s) to remotely monitor said one or more system functions or parameters</p> <p><u>Structure</u>: personal computer, electronic day planner, or computerized building management system, and equivalents thereof</p> <p>This claim element is directed to software and the specification fails to “disclose an algorithm for performing the claimed function.” <i>Williamson v. Citrix Online, LLC</i>, 792 F.3d 1339, 1352 (Fed. Cir. 2015) (<i>en banc</i>). Therefore, the claim is indefinite.</p>

The use of the word “device” in the term “remote system monitoring/control device,” recited in Claim 1, is just a verbal construct that does not connote sufficiently definite structure. It therefore is “tantamount to using the word ‘means,’” and “governed by section 112(6).” *See Williamson*, 792 F.3d at 1350. Nevertheless, IWS claims that “the context and structure provided within the claim element itself and the preceding claim elements” keeps the term “remote system monitoring/control device” outside the scope of section 112(f). (Dkt. 55 at 19.) IWS, however, cannot even identify what that context and structure might allegedly be. Instead, it baldly attempts to analogize the claim term to the term “distributed information access point” construed in *Intellectual Ventures*, 2016 U.S. Dist. LEXIS 3299. *Intellectual Ventures* does not

support IWS's position.

To the contrary, *Intellectual Ventures* demonstrates that the term “remote system monitoring/control device” is a means-plus-function limitation. That court concluded that the term “distributed information access point” was not a means-plus-function limitation because it found that the term “access point,” as reflected in the specification, referred to the structure of a specific feature known in the art—a “network resource.” *See id.* at *26-27. In contrast, in this case, the term “monitoring/control device” does not connote structure of any particular feature. *See Robert Bosch, LLC v. Snap-On Inc.*, 769 F.3d 1094, 1099 (Fed. Cir. 2014) (“Indeed, this court has found the word ‘device’ to be a non-structural, ‘nonce’ word.”); *Ergo Licensing*, 673 F.3d at 1363-64 (“The recitation of ‘control device’ provides no more structure than the term ‘control means’ itself, rather it merely replaces the word ‘means’ with the generic term ‘device.’”). And the term “remote system” does not provide any structural context; it merely connotes a relative location.

For a corresponding structure, the patent does nothing more than reference a personal computer or a computerized building management system without providing any software or algorithm. (*See, e.g.*, '764 patent, 12:60-13:39; 14:10-32; 14:44-15:24.) These are not just preferred embodiments because the language of Claims 1, 4, and 7 makes clear that remote input is required. And the only portions of the specification that breathe life into those claims are the above citations to using a computer to perform this function – without any corresponding algorithm.

IWS therefore attempts invoke the “narrow exception.” *Ergo Licensing*, 673 F.3d at 1364. Again, however, IWS's argument is misplaced. Indeed, IWS concedes that Kohler has correctly identified the claimed functions. (*See* Dkt. 55 at 13.) Those functions require more

than just a generic computer component sending, receiving and generating signals, they require performing these functions for special purposes—in particular, remotely monitoring and controlling system functions and parameters. Accordingly, “the default rule requiring disclosure of an algorithm applies.” *Id.* Because the ’764 patent undisputedly does not disclose such an algorithm, Claim 1 is invalid as indefinite.

III. The Court Should Reject IWS’s Remaining Proposed Constructions.

IWS’s repeatedly argues that the claim terms of the ’764 patent need no construction and should all be given their ordinary meaning. “Properly viewed,” however, “the ‘ordinary meaning’ of a claim term is its meaning to the ordinary artisan after reading the entire patent.” *Phillips*, 415 F.3d at 1321. Thus, “an instruction giving a term its ‘plain and ordinary meaning’” will not suffice when the intrinsic record leads to a “dispute about claim scope that has been raised by the parties.” *Eon Corp. IP Holdings LLC v. Silver Springs Networks, Inc.*, 815 F.3d 1314, 1318-21 (Fed. Cir. 2016).

A. “Fluid Supply Control Valve” (Claims 1 and 26)

IWS’s Proposed Construction:	Kohler’s Proposed Construction:
Plain and ordinary meaning Or, in the alternative: Valve which regulates flow from a fluid supply	Electronically controlled valve capable of opening and closing smoothly, rapidly, and with adequate precision to achieve fine control of fluid supply

The term “fluid supply control valve,” recited in Claims 1 and 26, has a clear meaning when read in light of the intrinsic record—“electronically controlled valve capable of opening and closing smoothly, rapidly, and with adequate precision to achieve fine control of fluid supply.” Contrary to IWS’s contentions, that meaning is not derived solely from some statement “discussed *only once* in the context of *one embodiment* disclosed in the specification.” (Dkt. 55 at 9.) Rather, it is properly based on the context and disclosures of the specification as a whole. *See Phillips*, 415 F.3d at 1316 (“A claim term can be defined only in a way that comports with

the instrument as a whole.”).

In the Background of the Invention, the ’764 patent criticizes “[c]onventional supply systems that rely on manual valve mechanisms to adjust fluid flow rates and temperatures” because they “suffer undesirable fluctuations in temperature and flow values.” (’764 patent, 1:27-47.) The patent attributes this to “inadequate control devices,” such as “input and valve regulatory mechanisms,” which require frequent manipulation and tolerating “reflexive changes and attendant delays for system equilibration in order to set and maintain desired temperature and flow values.” (*Id.*) The patent then claims that “[d]espite the long persistence of these problems, current input and mixing systems for controlling fluid and gas temperature and flow rates fail to provide a full range of adequate solutions” and continues to criticize the use of manually-adjusted control devices as “time consuming” and “even dangerous.” (*Id.* at 1:48-67.)

“More advanced input and mixing devices,” the ’764 patent acknowledges, “incorporate electronic input and control mechanisms to regulate fluid or gas temperature and flow in this context.” (*Id.* at 2:1-4.) But it criticizes those as well, claiming as follows:

While the foregoing, electronic fluid control systems overcome many of the problems that attend conventional plumbing and manufacturing systems, these systems nonetheless suffer a variety of drawbacks in terms of cost, complexity of installation and operation, range and flexibility of functions, and other attributes. Each of the systems outlined above suffer from some degree from these common shortcomings. Moreover, among the electronic fluid and gas supply systems heretofore proposed, a variety of desirable features that would add yet additional desirable functions and uses have not been developed.

(*Id.* at 3:41-54; *see also id.* at 2:25-29 (criticizing “the valve arrangement, configuration of the water discharge channel, and the temperature sensor device” of one such prior art system as “not directed to achieving rapid and accurate temperature and flow responses”).)

Against this backdrop, the specification declares that one of the objects of the invention is to “provide a fluid and gas control system which is easily operated and which provides for . . .

accurate system maintenance, of a broad range of supply parameters, including pre-determined temperatures, flow rates, periods of flow, and volumes.” (*Id.* at 3:66-4:4.) It further claims in the Summary of the Invention that the invention achieves this and other objects and advantages with a system that includes “one or more fluid or gas supply control valve(s) for regulating flow of a first fluid or gas and a second fluid or gas from corresponding first and second fluid or gas source into a mixing port.” (*Id.* at 4:14-20.) “The system of the invention,” the patent explains, includes a

[a] system control device . . . which receives signals from [a] thermosensor and user interface and processes the signals to generate appropriate control signals to control said fluid supply control valve actuator(s) . . . achieve programmed or user-selected set temperature, flow rate and volume at the system outlet.

(*Id.* at 4:32-44; *see also id.* at 7:32-65.)

Then, in the Description of Specific Embodiments, the specification instructs one of ordinary skill in the art that “[c]ommensurate with broader aspects of the invention, [the supply] and other control valves can be selected from a variety of conventional, electronically controlled valves useful for regulating (*i.e.*, initiating, terminating and modulating) flow of gases and/or fluids” and further mandates the following:

The valves **must** be capable of opening and closing smoothly, rapidly, and with adequate precision to achieve fine control of hot and cold water supply. In this regard, the valve **must** be capable of being adjusted by very small increments to provide a sufficient degree of precision for user selection and adjustment of water temperature. Additionally, the valves **must** be adapted for rapid actuation but must not move too fast or too far upon actuation so as to result in an adjusted valve position that overshoots a target supply setting.

(*Id.* at 5:34-51 (emphasis added).)

The Federal Circuit has found clear disclaimers of claim scope in similar circumstances. *See, e.g., Andersen Corp. v. Fiber Composites, LLC*, 474 F.3d 1361, 1366 (Fed. Cir. 2007) (reasoning that specification’s use of word “requires” limited the claim). Moreover, even absent

a clear disclaimer, “[t]he construction that stays true to the claim language and most naturally aligns with the patent’s description of the invention” ultimately will be “the correct construction.” *Meds. Co. v. Mylan, Inc.*, Nos. 2015-1113, 2015-1151, 2015-1181, 2017 U.S. App. LEXIS 5947, at *29 (Fed. Cir. Apr. 6, 2017). Thus, contrary to IWS’s apparent arguments, “a patentee’s choice of embodiments can shed light on the intended scope of the claim.” *C.R. Bard, Inc. v. U.S. Surgical Corp.*, 388 F.3d 858, 8653 (Fed. Cir. 2004).¹⁰

IWS’s remaining complaint that Kohler’s proposed construction incorporates words of the disputed terms also is misplaced. “A description of what a component does may add clarity and understanding to the meaning and scope of the claim.” *Funai Elec. Co. v. Daewoo Elecs. Corp.*, 616 F.3d 1357, 1366 (Fed. Cir. 2010). “The criterion is whether the explanation aids the court and the jury in understanding the term as it is used in the claimed invention.” *Id.* Kohler’s proposed construction achieves that goal, stays true to the claim language, and naturally aligns with the patent’s description of the invention.

IWS’s proposed construction, on the other hand, is completely divorced from the intrinsic record. Indeed, IWS even adopts a defined term from the specification—“regulates”—in its proposed construction, but fails to define “regulate.” (*See* ’764 patent, 5:34-38 (defining “regulating” as “initiating, terminating and modulating”).) Claim terms, however, “cannot be construed in a vacuum.” *Taurus IP, LLC v. DaimlerChrysler Corp.*, 726 F.3d 1306, 1320 (Fed. Cir. 2013); *see also Nystrom v. TREX Co.*, 424 F.3d 1136, 1144-45 (Fed. Cir. 2005) (“[Patentees are] not entitled to a claim construction divorced from the context of the written description and prosecution history”). IWS’s attempt to do so here should be rejected.

The term “fluid supply control valve” means “electronically controlled valve capable of

¹⁰ This is especially true here, where there is only one disclosed embodiment of the claimed control valves. *See Meds. Co.*, 2017 U.S. App. LEXIS 5947, at *28 (“As the only embodiment of efficient mixing, Example 5 is highly indicative of the scope of the claims.”) (quotations omitted).

opening and closing smoothly, rapidly, and with adequate precision to achieve fine control of fluid supply.”

B. “Fluid Control Valve” (Claims 1 and 26)

IWS’s Proposed Construction:	Kohler’s Proposed Construction:
Flow control valve Construed as: Valve which regulates the flow of a mixed fluid	Flow control valve Construed as: Electronically controlled valve capable of opening and closing smoothly, rapidly, and with adequate precision to achieve fine control of flow

The parties agree that the term “fluid control valve,” recited in Claims 1 and 26, refers to the “flow control valve” repeatedly referenced in the specification, but they disagree as to its meaning. (*See* Dkt. 52-1 at 1.) For largely the same reasons discussed above with respect to the term “fluid supply control valve,” one of ordinary skill in the art having read the intrinsic record would understand that the flow control valve means “electronically controlled valve capable of opening and closing smoothly, rapidly, and with adequate precision to achieve fine control of flow.”

IWS’s contention that the specification’s mandatory language regarding control valve capabilities is limited to “the supply valves” is incorrect. (Dkt. 55 at 11.) That portion of the specification makes clear that it is referring to the capabilities of not only supply valves, but “other control valves” as well. (’764 patent, 5:34-35.) Moreover, the criticisms in the patent’s Background of the Invention section regarding the alleged inadequate control devices of the prior art quoted in Section III.A, above, are equally applicable to the claimed flow control valve.

In addition, contrary to IWS’s claim differentiation argument, Kohler’s construction does not “render dependent Claim 3 superfluous.” Dependent claim 3 modifies the scope of the separately claimed “flow control valve actuator,” limiting it to “an electric, pneumatic, hydraulic or magnetically driven control motor.” (’764 patent, 20:34-36.) IWS does not contend that any

of these options cannot be used with an electronically controlled valve, and IWS's claim that one of the recited options—an electric control motor—would “arguably” implicate an electronically controlled valve does not make the entire limitation meaningless. The recited control motors of Claim 3 still narrow the “flow control valve actuator” of Claim 1—*e.g.*, Claim 3 will not literally read on a solenoid, whereas Claim 1 will. As such, “claim differentiation is maintained.” See *Laitram Corp. v. Rexnord, Inc.*, 939 F.2d 1533, 1538 (Fed. Cir. 1991). Even if it was not, “[c]laim differentiation is a guide, not a rigid rule” and cannot be used to modify the meaning of a claim that “will bear only one interpretation.” *Id.*

The term “fluid control valve” means “electronically controlled valve capable of opening and closing smoothly, rapidly, and with adequate precision to achieve fine control of flow.”

C. “User Interface Input” (Claim 7)

IWS's Proposed Construction:	Kohler's Proposed Construction:
Plain and ordinary meaning	See definition of: “User input means for . . .”
Or, in the alternative: Input to the user interface	

The term “user interface input,” recited in Claim 7, must be construed to mean “user input means for . . .,” as construed below. Otherwise, Claim 7 is invalid as indefinite for lack of antecedent basis because there is no “user interface input” recited in independent Claim 1 from which this claim depends—only “a user interface including a user input *means*.” See *Halliburton Energy Servs. v. M-I LLC*, 514 F.3d 1244, 1249 (Fed. Cir. 2008) (“We have also stated that a claim could be indefinite if a term does not have proper antecedent basis where such basis is not otherwise present by implication or the meaning is not reasonably ascertainable.”).

Claim terms, however, should be construed to preserve their validity, if possible. *Becton, Dickinson & Co. v. Tyco Healthcare Grp., LP*, 616 F.3d 1249, 1255 (Fed. Cir. 2010); *see also Meds. Co.*, 2017 U.S. App. LEXIS 5947, at *15 (rejecting claim construction that would not

“provide ‘reasonable certainty’ regarding the scope of the asserted claims”). In the context of these claims, it makes sense that the term “user interface input” would refer back to the “user input means for . . .” of Claim 1, since Claim 7 goes on to define the “user interface input” by reference to specific structures from the specification that correspond with the “user input means”—*i.e.* “a keypad, touchpad, joystick, roller, pen selector, voice input, or optical input.” (See Dkt. 52-1 at 13 (setting forth agreed-upon structure for the term “user input means”).)

IWS does not offer any meaningful argument to the contrary, other than to claim that the meaning of the term is so plain that no claim construction is needed and to direct the Court to its arguments against construing “user input means” as a means-plus-function limitation. The former is obviously incorrect as it is unclear (absent a proper claim construction) whether the “user interface input” refers to the “user input means” of Claim 1 or some other input. And the proper construction of “user input means” is addressed below.

D. “User Input Means for Selecting a Set Temperature, Flow Rate and Volume of Fluid at Said System Outlet” (Claim 1 and 26)

IWS’s Proposed Construction:	Kohler’s Proposed Construction:
<p>Not a means-plus-function claim; plain and ordinary meaning; or</p> <p><u>Function</u>: selecting a set temperature, flow rate or volume</p> <p><u>Agreed Structure</u>: external data processing device; keypad; user display; touchpad; joystick; roller; pen selector; voice input; optical input; image input coupled with optical recognition; menu-based input template; menu of selectable functions and parameters; control panel</p>	<p><u>Function</u>: selecting a set temperature, flow rate and volume of fluid at said system outlet</p> <p><u>Agreed Structure</u>: external data processing device; keypad; user display; touchpad; joystick; roller; pen selector; voice input; optical input; image input coupled with optical recognition; menu-based input template; menu of selectable functions and parameters; control panel</p>

The term “user input means,” recited in Claims 1 and 26, is presumptively a means-plus-function term. *See Williamson*, 792 F.3d at 1348. IWS has failed to overcome that presumption. Indeed, the limitation in which this term appears is directed toward a “user interface” that

includes a “user display means,” which IWS concedes is a means-plus-function term. (*See* Dkt. 52.) This begs the question: what is different about the “user input means”? IWS does not say, but points to the specification’s disclosure of a corresponding “user input device” as somehow demonstrating that the claim term connotes sufficiently definite structure. The specification’s use of the generic term “device” in place of “means,” however, does not help IWS’s position. *See Ergo Licensing*, 673 F.3d at 1363. “User input means” is a means-plus-function term and must be construed according to its claimed function and the corresponding structure in the specification.

If this is a means-plus-function term, there is no dispute as to structure: “external data processing device; keypad; user display; touchpad; joystick; roller; pen selector; voice input; optical input; image input coupled with optical recognition; menu-based input template; menu of selectable functions and parameters; control panel.” (Dkt. 52-1 at 13.) IWS, however, rewrites the claimed function, replacing the conjunctive term “and” with the disjunctive term “or.” This is improper. It also has no support in the specification, which consistent with the claims, describes the “system of the invention” as including “a user input for selecting set temperature, flow rate *and* volume of fluid or gas at the system outlet.” (’764 patent, 4:32-34 (emphasis added); *see also id.* at 10:8-11 (“user input device 62 can be variably constructed and integrated with the control unit 34 . . . to allow for user selection of a [*sic*] numerous system parameters and functions”).)

The claimed function is the function expressly recited in the claims and proposed by Kohler—“selecting a set temperature, flow rate and volume of fluid at said system outlet.”

E. “Fluid Supply Control Valve Actuator . . . for Actuating Opening and Closure Operations Thereof” (Claims 1 and 26)

IWS’s Proposed Construction:	Kohler’s Proposed Construction:
Not a means-plus-function claim; plain and ordinary meaning; or <u>Function</u> : valve actuation <u>Structure</u> : control motor, stepper motor, solenoid, electronic valve controller, electric, pneumatic, hydraulic, or magnetic driven motor	<u>Function</u> : actuating opening and closure operations of a fluid supply control valve, which valve must be capable of opening and closing smoothly, rapidly, and with adequate precision to achieve fine control of fluid supply, where the actuator moves a valve member in relationship to an associated valve seat to open or close the valve <u>Structure</u> : electric, pneumatic, hydraulic, or mechanically driven motor, or solenoid, and structural equivalents thereof

The use of the word “actuator” in the term “fluid supply control valve actuator . . . for actuating opening and closure operations thereof,” recited in Claims 1 and 26, is nothing more than a verbal construct that does not connote sufficiently definite structure. It therefore is “tantamount to using the word ‘means,’” and “governed by section 112(6).” *See Williamson*, 792 F.3d at 1350.¹¹ The claim language demonstrates that “actuator” is a nonce term because the claim refers to using an actuator for “actuating.” (’764 patent, Cl. 1.) The specification further supports treating this as a means-plus-function element as it refers to the “valve actuation means” and the “actuator means” in its discussion of an embodiment of the invention. (’764 patent, 5:38-42; 16:7-13.)

IWS wrongly defines the structure as a “control motor,” a specific type of control motor, *i.e.*, “stepper motors,” and a processor, *i.e.* “electronic valve controllers.” In contrast, Kohler provides examples of control motors. That is, Kohler’s proposed structure does not mix the genus (control motors) with the species (types of control motors). Kohler’s construction is supported by the specification which discloses a variety of control motors such as electric,

¹¹ Onorati testified that there could be “lots of different implementations that would qualify [something] as an actuator.” (Onorati Dep. at 90.)

pneumatic, hydraulic, or mechanically driven motors. (*See* '764 patent, 5:52-6:4.)¹² Moreover, IWS's attempt to include an "electronic valve controller" in the structure confuses the definition because it conflates the controlling motor with the processor needed to control the motors.

The parties also disagree on the function. IWS's proposed function is flawed because it is not tied to the claim language and if adopted would improperly rewrite the claim term, *i.e.*, "fluid supply control valve actuator . . . for valve actuation." Instead, the claimed function, as proposed by Kohler, is expressly recited in the claims—"actuating opening and closure operations of a fluid supply control valve."¹³ IWS also takes exception to Kohler using the definition of "fluid supply control valve" in its proposed function. By including that definition here, Kohler is not altering the claimed function; rather, it is simply trying to clarify the claims by precisely describing what the actuators must do, which is one of the purposes of claim construction. *See U.S. Surgical Corp. v. Ethicon, Inc.*, 103 F.3d 1554, 1568 (Fed. Cir. 1997) ("Claim construction is a matter of resolution of disputed meanings and technical scope, to clarify and when necessary to explain what the patentee covered by the claims . . .").

F. "Flow Control Valve Actuator . . . for Actuating Opening and Closure Operations Thereof" (Claims 1 and 26)

IWS's Proposed Construction:	Kohler's Proposed Construction:
Not a means-plus-function claim; plain and ordinary meaning; or <u>Function</u> : opening or closing a valve <u>Structure</u> : control motor, stepper motor, solenoid, electronic valve controller, electric, pneumatic,	<u>Function</u> : actuating opening and closure operations of a flow control valve, which valve must be capable of opening and closing smoothly, rapidly, and with adequate precision to achieve fine control of flow, where the actuator moves a valve member in relationship to an associated valve seat to open or close the valve <u>Structure</u> : electric, pneumatic, hydraulic, or magnetically driven motor, or solenoid, and structural equivalents

¹² The parties agree that the structure also includes a solenoid.

¹³ IWS appears to agree with Kohler's position that the function of the actuator includes "mov[ing] a valve member in relationship to an associated valve seat to open or close the valve" as recited in the specification. (*See* '764 patent, 5:52-60.)

IWS's Proposed Construction:	Kohler's Proposed Construction:
hydraulic, or magnetic driven motor	thereof

The use of the word “actuator” in the term “flow control valve actuator . . . for actuating opening and closure operations thereof,” recited in Claims 1 and 26, is nothing more than a verbal construct that does not connote sufficiently definite structure. It therefore is “tantamount to using the word ‘means,’” and “governed by section 112(6).” *See Williamson*, 792 F.3d at 1350. Indeed, the claim language demonstrates that “actuator” is a nonce term because the claim refers to using an actuator for “actuating.” (’764 patent, Cl. 1.) Thus, for the same reasons as above, it must be construed as a means-plus-function term. (*See supra* at III.E.)

Consistent with the Kohler’s construction of the “fluid control supply valve actuator,” the function should be interpreted as: “actuating opening and closure operations of a flow control valve, which valve must be capable of opening and closing smoothly, rapidly, and with adequate precision to achieve fine control of flow, where the actuator moves a valve member in relationship to an associated valve seat to open or close the valve.” And the corresponding structure should be limited to the following: “electric, pneumatic, hydraulic, or magnetically driven motor, or solenoid, and structural equivalents thereof.”

G. “Memory Means for Entry and Storage of User-Defined Temperature Settings” (Claim 6)

IWS's Proposed Construction:	Kohler's Proposed Construction:
Not a means-plus-function claim; plain and ordinary meaning; or <u>Function</u> : entry and storage of data <u>Structure</u> : computer memory	<u>Function</u> : Entry and storage of user-defined temperature settings in a nonvolatile memory device <u>Structure</u> : This claim term fails to recite sufficiently definite structure and the ’764 patent fails to disclose any structure corresponding to the “memory means.” <i>Williamson v. Citrix Online, LLC</i> , 792 F.3d 1339, 1351 (Fed. Cir. 2015) (<i>en banc</i>). Therefore, the claim is indefinite.

The term “memory means,” recited in Claim 6, is presumptively a means-plus-function

term by virtue of its use of the word “means.” *See Williamson*, 792 F.3d at 1348. IWS offers no evidence to rebut this presumption.

Here, the function is entering and storing user temperature settings in “non-volatile” memory. The plain language of Claim 6 refers to “storage of user-defined temperature settings.” That is, when the system turns off, it must retain the user’s temperature settings. (’764 patent, 3:66-4:4.) And that requires “non-volatile” memory. (*Id.* at 7:16-20.) Onorati also confirmed that the memory has to retain the user’s stored temperature preferences and must retain that information even if the power is turned off. (Onorati Dep. at 100-01.)

If the Court finds there is sufficient structure for this claim, then that structure must perform the above recited function. That is, the required structure is non-volatile computer memory as IWS apparently concedes in its brief. (Dkt. 55 at 24-25.)

H. “Domestic Water Supply System” (Claim 24)

IWS’s Proposed Construction:	Kohler’s Proposed Construction:
Not governed by 112(f); plain and ordinary meaning	<p><u>Structure</u>: Fig. 1, Fig. 3, Fig. 4, and equivalents thereof</p> <p>This claim term fails to recite sufficiently definite structure, and thus 35 U.S.C. § 112(f) applies. <i>Williamson v. Citrix Online, LLC</i>, 792 F.3d 1339, 1349 (Fed. Cir. 2015) (<i>en banc</i>)</p>

Claim 24 does nothing more than recite independent Claim 1 and add “which comprises a domestic water supply system.” Put simply, it is not clear what Claim 24 adds to Claim 1, and it certainly has no “plain and ordinary meaning.”

One possibility is that using the word “system” in the term “domestic water supply system” is just a verbal construct that does not connote sufficiently definite structure. *See Williamson*, 792 F.3d at 1350. Another possibility, if this is not a means-plus-function claim element, is that Claim 24 is not clear to a person of ordinary skill in the art, making the claim indefinite under section 112(b).

Either way, the specification teaches that the “domestic water supply system” is on par with a “central heating and cooling system,” described in the nearly identical Claim 25 (’764 patent, 4:45-47), suggesting that “domestic” refers to a house or single building. The specification also equates this system with a “domestic plumbing system” (’764 patent, 5:17-28), again suggesting that this terms is referring to a single house. Moreover, Figures 1, 3, and 4 teach that this element is referring to a single house. Onorati even testified that he does not understand this phrase, but he assumed that it refers to the water supply in a house. (Onorati Dep. at 101 (“I don’t know. I – I would say it’s a watered supply in your house. But I don’t really know what the.”).)

In sum, Claim 24 is either a means-plus-function term and the required structure is the plumbing in a house or building, or the claim does not make sense to a person of ordinary skill in the art and is invalid.

I. “External Data Storage and Input Means for Storing and Transferring Data to Said System Control Means to Control One or More System Function(s) or Parameter(s)” (Claim 26)

IWS’s Proposed Construction:	Kohler’s Proposed Construction:
Not a means-plus-function claim; plain and ordinary meaning; or <u>Function</u> : storing and transferring data <u>Agreed Structure</u> : personal computer; electronic day planner; computerized building management system; external data processing device; personal data storage template; hard disk; floppy disk; zip or jaz drive; CD-ROM; magnetic or optical data storage devices	<u>Function</u> : storing and transferring data to said system control means to control one or more system function(s) or parameter(s) <u>Agreed Structure</u> : personal computer; electronic day planner; computerized building management system; external data processing device; personal data storage template; hard disk; floppy disk; zip or jaz drive; CD-ROM; magnetic or optical data storage devices

The term “external data storage and input means” is presumptively a means-plus-function claim element. *See Williamson*, 792 F.3d at 1348. The parties agree regarding the corresponding structure. (*See* Dkt. 52-1 at 6-7.) They also appear to now be in agreement

regarding the claimed function. (*See* Dkt. 55 at 16 (“Plaintiff has adopted Defendant’s articulation of the function since no real dispute exists with respect to it . . .”).) Nevertheless, IWS insists that section 112(f) is not applicable “because this element provides the basic computing functions of data storage and transfer.” (Dkt. 55 at 21.) That is not the law.

IWS’s cited case law—*In re Katz Interactive Call Processing Litig.*, 639 F.3d 1303 (Fed. Cir. 2011)—involved claims reciting “means” or “analysis structure” for performing generic computer functions like “processing,” “receiving,” and “storing.” *See id.* at 1314, 1316. The Federal Circuit did not hold that such claims can avoid the strictures of section 112(f). In *Ergo Licensing*, the Federal Circuit explained its decision *In re Katz*, holding that “in the rare circumstances where any general-purpose computer without any special programming can perform the function,” a general purpose computer can constitute sufficiently definite structure in the specification without the need to disclose an algorithm. *Ergo Licensing*, 673 F.3d at 1365. Like *Ergo Licensing*, here, the agreed function—storing and transferring data to said system control means to control one or more system function(s) or parameter(s)—“requires more than merely plugging in a general-purpose computer[,] [r]ather, some special programming would be required” to control one or more system function(s) or parameter(s). *Id.* Indeed, the ’764 patent, and Claim 26 in particular, requires control of three variables, temperature, flow rate, and volume, which requires special or original programming as discussed above in Section II.A.

In short, section 112(f) is applicable. The Court should adopt the parties’ now-agreed-upon claimed function and corresponding structure as the construction for this term.

Conclusion

For the reasons set forth above, defendant Kohler respectfully requests that the Court find that the ’764 patent is indefinite and invalid or, in the alternative, adopt the proposed claim constructions set forth in the Memorandum.

Dated: April 26, 2017

Respectfully submitted,

/s/ Arthur Gollwitzer III

Arthur Gollwitzer III (24073336)

agollwitzer@michaelbest.com

MICHAEL BEST & FRIEDRICH LLP

2801 Via Fortuna, Suite 300

Austin, TX 78746

Telephone: 512-640-3161

Rachel N. Bach (*pro hac vice*)

rnbach@michaelbest.com

MICHAEL BEST & FRIEDRICH LLP

100 East Wisconsin Avenue, Suite 3300

Milwaukee, WI 53202

Telephone: 414-271-6560

Attorneys for Defendant Kohler Co.

Certificate of Service

I, Arthur Gollwitzer III, an attorney of record in this matter, certify that on April 26, 2017, I caused a copy of the following document:

**Defendant Kohler Co.'s
Claim Construction Memorandum**

to be filed with the Clerk of Court of the United States District Court for the Eastern District of Texas by electronic (ECF) filing, which provides service on all counsel of record by e-mail delivery to the following:

Eric M. Albritton
Shawn A. Latchford
Albritton Law Firm
PO Box 2649
Longview, TX 75606
ema@emafirm.com
sal@emafirm.com

Jay D. Ellwanger
Daniel L. Schmid
DiNovo Price Ellwanger & Hardy LLP
7000 North MoPac Expressway
Suite 350
Austin, TX 78731
jellwanger@dpelaw.com
dschmid@dpelaw.com

/s/ Arthur Gollwitzer III
Arthur Gollwitzer III